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ABSTRACT

Instruction that promotes the awareness and use of contextual aids in reading may be achieved by use of the cloze procedure in the classroom; training with the cloze procedure helps to focus the attention of the student on the conceptual aspect of reading rather than on the perceptual, and may be used from the primary grades through college. This paper reviews the literature from 1953 to 1974 on the use of the cloze procedure as an instructional device. Recommendations for the use of the cloze device in instruction include the following: begin with a two-item multiple-choice format in material that is at or below the student's independent reading level; instruct students to read silently the entire cloze passage; discuss progress; do not demand the exact word, but accept close guesses and synonyms; use a self-checking format; have students make comparison of cloze passages with the original passage; and make use of systematic, organized, long term instruction. (DF)

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USING THE CLOZE PROCEDURE AS AN INSTRUCTIONAL DEVICE: WHAT THE LITERATURE SAYS

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USING THE CLOZE PROCEDURE AS AN INSTRUCTIONAL DEVICE: WHAT THE LITERATURE SAYS

Major Research On Using Cloze As An Instructional Device

Even as early as 1908 Huey remarked on the importance of context when he described the "forward push characterized by feelings of expectance, curiosity and strain when a person was shown a word in context rather than singly" (Huey, 1908, p. 155). Later Artley (1943) wrote that it was imperative that children not only be aware of context clues but that they be able to utilize them automatically in all their reading. For, according to Artley, it was only by using context fully and automatically that the reader might come to full understanding and interpretation of the printed matter. This statement suggests the need for instruction in the use of context skills. According to McCullough (1958), this instruction on the "awareness and use of contextual aids would be best effected by direct teaching and continuous attention" (p. 299).

One way of focusing attention on context is to use the cloze procedure. Taylor (1953) published the landmark work which first proposed employing the cloze procedure in education. Utilizing Miller's work in communication theory, Osgood's dispositional mechanism, and statistical principles of random sampling, Taylor

proposed that the cloze procedure might be effectively used to get at the readability of given materials. Taylor derived the term, cloze, from the Gestalt concept of closure which is a tendency to fill in the missing parts in a thought structure.

From Taylor's start in 1953, many other educators have come forward to propose various appropriate ideas for creatively and constructively employing the cloze procedure. One such idea suggested using the cloze procedure as an instructional device to teach the student to use context clues. However, much experimentation was needed before general guidelines could be evolved regarding how the cloze procedure could be used most effectively in the classroom. Furthermore, as this experimentation was carried out teachers and researchers began to develop variations of the cloze procedure. Eventually, a body of literature was accumulated which suggested how, when, and why the cloze procedure might be used most effectively in the classroom. It is the purpose of this paper to review important research, informal experimentation and other relevant publications regarding the use of the cloze procedure as an instructional tool.

Bloomer (1962) used the cloze procedure as a remedial teaching technique for college students. Of three groups in the study, one received cloze exercises, a second proceeded with traditional remedial exercises, and a third group received no treatment at all. Pre- and posttesting on

the survey section of the Diagnostic Reading Test revealed that the group using cloze exercises increased significantly more in comprehension and total reading ability. Also, the achieved grade point averages were greater than the predicted grade point averages made at the beginning of the study.

Schneyer (1965) using cloze exercises built on 10th word mechanical deletions and another built on noun-verb deletions, explored the effects of cloze exercises on 6th grade pupils. The experimental group did three exercises of each type at each reading level (making a total of 57 exercises) at the rate of one a day. The control group received the regular basal instructional program. The results showed that there were no significant differences in performance on a final reading comprehension test between the mean scores of pupils who used the cloze exercises and those who did not.

Bloomer (1966) and Heitzman and Bloomer (1967) explored the effects of using a non-overt reinforced cloze procedure on reading comprehension. Hypothesizing that doing cloze exercises was intrinsically reinforcing because the individual matched his language patterns to those of the author, Bloomer and Heitzman deduced that an individual just doing cloze exercises without feedback could improve his reading comprehension. Both studies utilized seven

different forms of deletion patterns: (1) Type 0--zero deletions: (This group was the control group which was required to read an intact passage with no deletions. Thus, this group did not do cloze passages, as such.) ; (2) Type 1-- 10% deletions: Random; (3) Type 2-- 10% deletions: Nouns; (4) Type 3-- 10% Verbs (auxiliary verbs were not included); (5) Type 4--10% Modifiers; (6) Type 5--10%: Prepositions and Conjunctions; and (7) Type 6--10%: Noun Determiners.

In the Bloomer study, 1,411 pupils from a school district in New York State in grades 5, 7, 9 and 11 were selected as subjects (Ss). Each student did a cloze exercise utilizing six of the deletion patterns along with 12 comprehension questions over each passage. Ten weeks after completion of the cloze exercises, the students were given a recall test comprised of thirty-six items. The thirty-six items consisted of six of the 12 comprehension questions which were used on each of the six exercises after each selection.

The results showed that Type 0, Type 1 (random deletions), Type 5 (prepositions and conjunctions) and Type 6 (noun determiners) deletions produced comprehension superior to the other types of deletion patterns. However, interestingly enough, the long term recall test showed that Type 6 (noun determiners), Type 5 (prepositions and conjunctions), Type 2 (nouns) and Type 3 (verbs) produced long term recall similar to any of the other deletion patterns. Type 0 and

Type 1 produced the lowest long term recall, in sharp contrast to the results of the paragraph comprehension questions given immediately after completion of the exercises. This result suggested to Bloomer that the cloze procedure measured a comprehension skill which is different from the traditional paragraph question technique.

In the Heitzman and Bloomer study, 125 9th grade students from an upstate New York school were the subjects (Ss). Each pupil received exercises of only a single deletion type. The Ss, then, worked on the cloze exercises at the rate of two a week for twelve weeks.

The Iowa Test of Basic Skills was used to measure differences between the Control (C) group and the Experimental (E) groups. The data showed that there were no significant differences between the C group and E groups in reading or in language skills, except in spelling. In spelling, those E groups which had deletions of either modifiers or prepositions and conjunctions appeared to increase in spelling ability.

In another related study, the most ambitious one to date, Bloomer and others (summarized in Jongsma, 1971) did a two-phase study in which Phase I consisted of 5th, 7th, 9th and 11th graders receiving a total of six cloze exercises in a three week period. In the second phase, called the longitudinal phase, 9th graders continued working two cloze exercises per week for a period of 12 weeks. Over 1000

students from 49 classrooms were involved. Seven treatment conditions were developed which consisted of: (1) no deletions, (2) mechanical deletions; and, deletions of (3) nouns, (4) verbs, (5) modifiers--adjectives and adverbs, (6) function words--prepositions and conjunctions; and, (7) noun determiners. Deletions were on 10% of the passages. Each passage was followed by 12 comprehension questions, six factual and six inferential. The theory was that just the act of filling in the cloze unit was intrinsically reinforcing and presumably would increase reading ability. The basic finding of this study was that there was no significant improvement in comprehension test scores as Ss progressed through the cloze exercises; the use of the non-overt reinforced cloze did not increase reading ability. However, there were differential effects of the varying syntactic deletions. For example, the deletion of noun determiners produced comprehension superior to that of intact passages. The removal of modifiers, on the other hand, distorted meaning and hampered comprehension. Thus, the authors suggested: (1) reinforcement by the teacher for correct responses, including synonyms and (2) providing a motivational scheme in that a student's movement through the exercises was contingent upon the quality of his responses.

Although most researchers concluded that cloze exercises could not be employed with children who were still learning decoding and word analysis skills (thus eliminating most children under the 4th grade) Kingston and Weaver

(summarized in Jongsma, 1971) examined the use of cloze-like tasks with culturally disadvantaged first graders. The experimenters began the reading lesson with a language experience approach and gradually began deleting lexical elements from the experience stories. Then the children were asked to suggest all words that would make sense for the deletions. Their contributions were discussed and related to the context.

Later in the year, several tests were given: (1) a series of cloze tests, (2) the Ginn Pre-Primer Achievement Test, (3) the GinnPrimary Achievement Test, and (5) the reading, arithmetic, and language sections of the California Achievement Test. Regarding the series of cloze tests, four kinds of cloze exercises were used:

a. Any word cloze--random, every nth

b. Multiple-choice, structural cloze--function words

c. Multiple-choice, lexical cloze--nouns, verbs, adjectives

d. Aural-reading cloze--random, every nth deletions.

After the data were analyzed, Kingston and Weaver reported two major ideas evolving from their study. First, both the multiple-choice, lexical cloze test and the any word cloze test proved to be better predictors of first grade reading achievement than did the standardized readiness tests. Second, the study demonstrated that first graders could, indeed, begin performing on written cloze tests soon after they began reading. An additional plus was that

the cloze technique proved to be highly motivating to the culturally disadvantaged students of this study.

Kennedy and Weener (1973) reported a study in which visual and auditory training was done using the cloze procedure in order to improve reading comprehension. Eighty third grade students, all below average in reading ability, were divided into four groups of twenty students each. Control group one received no special treatment and remained in the regular classroom. Control group two spent their time individually practicing oral reading for the same time that the experimental reading group received training visually with the cloze procedure, and the experimental listening group received training auditorially with the cloze procedure. Each training group began each session by getting instructions and three sample sentences. Then, ten training sentences were presented, either visually or auditorially depending on the experimental condition to be followed. After this, each experimental group was presented with a short story either auditorially or visually. Each session lasted for twenty minutes and was continued for five sessions. Synonym scoring was done in which a word was considered correct if it made sense both syntactically and semantically.

The results showed that visual training with cloze exercises improved reading comprehension, based on The Durrell Listening-Reading Series reading comprehension subtest. Furthermore, there was some effect from visual

training on the listening subtest, as well. The auditory training showed transfer effects to the listening tests of the Durrell Series. Last, the group receiving auditory training scored higher on the Durrell reading comprehension subtest than the control class group, but not higher than the control reading group.

From this study, Kennedy and Weener surmised that cloze training resulted in an increased ability to use context clues. Furthermore, the researchers felt that using the cloze procedure had a psychological effect in that the students began to pay attention to units longer than the word. Finally, they suggested that the cloze procedure warranted serious consideration in a remedial reading program, since the experimental group receiving visual training scored an average of one grade level higher than the other three groups on the Durrell reading comprehension subtest. This result came about after only a total of one hour and forty minutes of individual training.

Many other researchers, in their doctoral dissertations, have examined the use of the cloze procedure in terms of its effectiveness as a teaching device. A number of those studies will be very briefly summarized here.

Smith (1969), using junior college readers who worked in materials in which every 10th concept word was deleted, found that the cloze procedure was valuable for demonstrating the process of comprehension, and for pointing out to students their own deficiencies in the comprehension process. However,

he had no measurable results in improvement of reading comprehension or lack of it.

Ellington (1972) used eleventh grade students who were divided into three groups: (1) cloze reading group, (2) conventional reading group and (3) no reading group. She found no significant differences existed among the three reading groups on a standardized reading comprehension test.

Rynders (1971), using the same materials presented either in a cloze format or in an unmutilated format followed by questions over the passage, found that there were no significant differences in the reading comprehension of 189 sixth graders.

All of these studies looked at together show the importance of very carefully determining the procedures to be followed when doing cloze exercises. In those studies in which positive results were found when using the cloze procedure, the conditions were characterized by the following: (1) working actively with students, (2) synonym scoring and (3) a deletion pattern other than mechanical.

Cloze In The Classroom

A number of researchers, important in developing and popularizing the cloze procedure, have offered interesting ideas regarding cloze. Their ideas have ranged from novel ideas to be used in teaching to varying ways of introducing cloze to the classroom (Hafner, 1967; Cranney, 1968; Bloomer, 1968; Rankin, 1968; Weaver, 1968; and Greene, 1972). However,

only ideas specifically relating to employing cloze in the classroom will be included here.

Bloomer (1968) suggested organizing material such that the first work the student gets will be highly structured. As the student continues to work, he will have to insert more and more of his own structure and organization. This process Bloomer calls fading. He observes that by using the fading cloze, the child will be assisted in the organization of his thoughts.

Along this same idea Rankin (1969) suggested preparing materials first with an every 10th word deletion, then an every 7th word deletion and finally an every 5th word deletion. Thus, the child begins with maximum context (and potential for success) by doing materials with an every 10th word deletion. Then, after he manages on an every 10th word deletion, he moves to an every 7th word deletion and so on. If this is done, said Rankin, the child will not become overwhelmed by what he determines to be an infinite choice of words to go in a blank.

Kennedy (1974) suggested that students first be given only one sentence on which to work. On this sentence the child would practice interpreting the overall meaning of a sentence with deletions. Next, the child would practice verbalizing the missing words. Eventually, the child would be led to see that information given in the preceding or following sentences might be needed to find the best word for the blank.

Finally, two other journal articles sum up very practically and specifically the procedural steps in using a cloze exercise in class (Schell, 1972; Bortnick and Lopardo, 1973). This writer found these articles useful in that they synthesized the major research discoveries and subsequently translated them into a set of procedures specific to classroom use. It is with these suggested procedures that this paper will be concluded.

The general guidelines recommended by the above mentioned authors are as follows:

1. Begin with a two item multiple-choice format in material at or below the student's independent reading level. At early stages, delete only nouns and verbs. Then gradually (a) give more items to choose from, (b) eliminate all answers and force the reader to supply words on his own, (c) and/or delete words in other grammatical categories.
2. Instruct students to read silently the entire cloze passage which has been prepared for them.
3. Discussion of the process is imperative. The students must understand how to delimit a body of feasible options, how to use context to determine whether a word is sensible, and how his own oral language is an inestimable help.
4. When scoring, the exact word should not be demanded if the instructor is using completion-type exercises. Rather, the instructor should

accept synonyms, definitions, and close guesses. Schell suggests that 95% correct is an acceptable score.

5. Se lections should be made self-checking for immediate reinforcement and feedback, as well as for easy recording on progress charts.
6. The cloze passage with possible correct responses should then be compared with the original, unmutilated passage.
7. The instruction should be systematic, long term and organized.

Bortnick and Lopardo admit that preparing cloze passages is time consuming. However, they point out that the teacher in doing this has the advantage of using materials which are particular to the students' needs. Furthermore, if Dolores Kennedy is correct in her assumption that training with the cloze procedure helps "focus the child's attention on the conceptual aspect of reading rather than the perceptual aspect," (Kennedy, 1974, p. 86) then the teacher's time will, indeed, be well spent.

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